Brian Oliver Lyndhurst Duke

Distinguished researcher on river blindness (b 24 June 1926; q Cambridge/Guy’s 1951; CBE, MD, MA, ScD, FRCP), d 3 June 2006.

Brian Duke died suddenly on Saturday 3 June while mowing his lawn. This was very uncharacteristic because it must have been the only project Brian did not finish properly. It was three weeks before his 80th birthday. His research and original contributions did more than those of any other single person to triumph over river blindness, one of the most terrifying scourges of Tropical Africa. This surely must be the greatest achievement in tropical medicine in the past 30 years, and the Mectizan Donation Programme that followed blazed the way for public private partnerships that are now so successfully being developed to combat HIV/AIDS and poverty.

Onchocerciasis, or river blindness, is a blinding parasitic infection carried from one person to another by a biting blackfly. The blackfly breeds in rivers and streams, and people who live nearby are bitten and infected. It occurs predominantly in sub-Saharan Africa and some isolated areas in Latin America. In the worst affected villages everyone is infected by the age of 5, and half the people will become blind before they die in their 30s. Altogether some 80 or so million people are at risk and 20 million are currently infected.

In the early 1950s, when Brian Duke first went to the Cameroons, there was no treatment for river blindness or “oncho.” He had been head of school at Eastbourne College, Sussex, and captain of cricket. He gained an open minor scholarship to Gonville and Caius College, Cambridge. After completing his undergraduate training, he studied at Guy’s Hospital (the seventh of eight generations of Duke to study there) and received his MB BChir in 1951 and a diploma in tropical medicine in 1952. He ultimately obtained an MA, MD, and a ScD, all from Cambridge.

From 1953 until 1975 he worked in the Cameroons, first for the Colonial Medical Service and later for the Medical Research Council. During this time he studied the migration of adult worms and microfilaria in the human body, their response to various new treatments, and the role and dynamics of different blackfly vectors, and conducted a range of animal studies. With his attention for detail and precise methods and observations his work really defined the dynamics of the disease and established the methodology for all future clinical trials. He even found a new worm, *Onchocerca dukeii*. In addition, he undertook extensive studies into loa loa and schistosomiasis, two other common parasitic infections. With the coming of independence he was actively involved in establishing pathology and parasitology services in
Nigeria, Ghana, Sierra Leone, and the Gambia. The oncho literature is liberally littered with
references to the pioneering work of B O L Duke. In all, he published 172 scientific papers.

In 1975 he went to the World Health Organization in Geneva as the chief of the Filarial
Infections Unit. He was closely involved with the TDR programme and particularly the
development of ivermectin. His experience in the field, his knowledge of the disease, and his
understanding of what was required in clinical trials, greatly facilitated the rapid assessment
of this exciting new drug. His outrageous suggestion in an interview reported in the magazine
South, that Merck should give ivermectin away free, may well have catalyzed the subsequent
Mectizan Donation Programme. It certainly caused him a lot of difficulties within the WHO
and a reprimand from the director general after Merck had complained. Later of course, Roy
Vagalos, the chief executive officer of Merck recounted the story somewhat differently.

However, in 1987 Merck went on and made the unprecedented commitment to provide
this miracle drug free to anyone with onchocerciasis, anywhere in the world for as long as
was needed. To date, over half a billion doses of the expensive drug have been distributed at
no cost and 60 million people a year in 34 countries receive treatment.

After Brian reached mandatory retirement age at the WHO in 1985 he worked at the
Armed Forces Institute of Pathology in Bethesda, Maryland, and in 1991 he “retired” with his
new and growing family to Lancaster. He joined the board of the River Blindness Foundation
and was their medical director until 1996. He worked tirelessly to expand the availability and
improve the distribution of ivermectin and continued to travel widely to endemic areas. He
continued to consult for various groups including the Carter Center in Atlanta and the WHO.
His expertise was constantly sought out by researchers especially to assess the effects of
treatment on worms, and his last paper on the effect of ivermectin on the genes and fertility of
female worms was published in January this year.

He received an OBE in 1961 and a CBE in 1975. His magnificent contributions were also
recognised by his colleagues. He received awards from the Royal College of Physicians, the
British, German, and American societies of tropical medicine, the Mectizan Expert
Committee, and Rotary International. He is survived by his wife, Diane, and children (Lottie,
Molly, Oliver, Annie, and Lucy) and five grandchildren.

On a personal note, I first met Brian when I visited the WHO on my way back from
Liberia in 1979. I had read much of his work and now having had a little experience of oncho
myself, I was eagerly looking forward to meeting the great man. Well, cap in hand, I
negotiated the halls and corridors of the intimidating headquarters of the WHO and in an
office I found Dr Duke; a more affable and friendly man it would be hard to imagine. Within
minutes the ice had been broken and we were deep in discussion about the practical aspects of drug studies in oncho, and well on the way to becoming firm friends. We worked closely together through the various meetings of TDR/FIL, WHO expert committees, the Mectizan Committee, and the River Blindness Foundation. We worked together on some of the ivermectin clinical trials. We had a delightful time in the field with him whenever he came to visit our group in Liberia. He would always dress for dinner and wear his special mosquito boots.

It was wonderful to meet Diane, and after she and Brian married I often stayed with them in Geneva, or Ferney Voltaire, and we had many wonderful times together. We were able to catch up as families when they moved to Bethesda and we lived up the road in Baltimore. It was wonderful to see so much more of them and watch my goddaughter Lottie in her early years and then to visit them in Lancaster, where Brian and Diane had so happily settled to be closer to Diane’s family.

He was a wonderful husband and father. He had a wry smile and a wicked sense of humour. He had been “brought up proper” and knew what was right, always did it himself and expected the same from others. His time in Africa gave him a wonderful range of stories and practical solutions to many problems. His intellect and memory made him a superb and practical scientist who quickly recognised the potential of new advances and rapidly applied them to further his and the world’s understanding. He was a great mentor to many and overall had an unwavering concern for humanity. [Hugh Taylor]